

Understanding Concentration, Attention and Focus

In the third of a series of eight resources, Performance Psychology Consultant Philippa McGregor offers insight into the general confusion about the nature and mechanisms of concentration and clarifies explanations of 'concentration,' 'attention' and 'focus'

The ability to concentrate on a task is central to many good sporting performances; whether this is focusing to keep improving and reach a personal target or trying to win a competition and maintain attention on what is required in the moment to succeed.

However, it is also a key skill for life and work, whether you are driving around a busy city or trying to write an important report.

As you read this article, have a think about some examples of concentration within your coaching.

Consider

- Can you remember as an athlete or player yourself when you struggled and found yourself getting distracted?
- Do you recognise this in some of the athletes that you coach?

Concentrating on specific thoughts, activities or features of the environment has been central to sport psychology given the importance of being able to **exert mental effort effectively** to achieve optimal sports performance (Moran, 2009). The psychological skill of concentration has been considered the 'executive' given that to some degree it controls all others (Karageorghis & Terry, 2011).

Despite more than a century of research in this field, there is still a great deal of **confusion about the nature and mechanisms of concentration**, with multiple terms used interchangeably, creating ongoing conceptual confusion for those trying to understand this area of performance.

The terms often used interchangeably are:

- concentration: deliberate decision to invest mental effort on important aspects of a situation
- focus: a point on which attention is concentrated
- attention: the selection of information for further processing while inhibiting other information.

When sports performers become distracted from a task, or experience a lapse in attention, it can cause detrimental performance effects (Bell & Hardy, 2009). By nature, **sports performance is dynamic**, as is concentration, with constant shifts between different stimuli occurring. To concentrate effectively means being able to fix attention on the right thing(s) at the right time, therefore **concentration is a skill** that involves decreasing attention to irrelevant stimuli or increasing attention to relevant stimuli (Karageorghis & Terry, 2011).

Controlling selectivity, direction and width of attention is vital for sports performance and all require development.

Selectivity is choosing what to focus on:

- Performers need to become good at devoting concentration capacity to the most relevant information.
- Learning to overcome distractions is crucial.

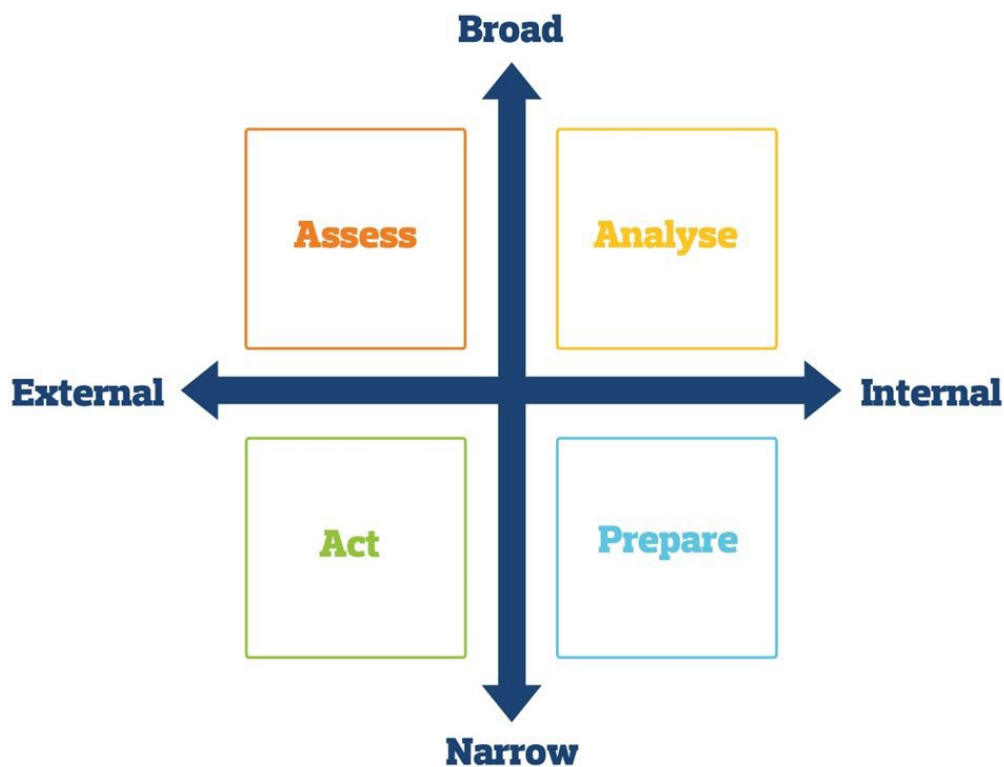
- In both skill learning and performance, research tells us that an external focus of attention (focusing on the effect of movement on the environment) is superior to an internal focus (focusing on own body or mechanics of the skill) (Wolf & Su, 2007).
- Having a clear external target and focusing on actions that are within one's own control will help prevent concentration from being derailed.

Direction and width refer to the fact that attention can be directed internally (thoughts and feelings) or externally (environment) as well as have a narrow (specific) or broad (bigger picture) focus.

These dimensions of concentration are what formed Nideffer's (1976) four attentional styles:

- Broad - Internal: Analyse (such as tactical analysis).
- Broad - External: Assess (such as environment conditions or teammate positioning).
- Narrow – Internal: Prepare (such as focusing on a specific thought, feeling, sensation or action).
- Narrow – External: Act (such as focusing on a specific object, target or person).

We frequently switch between these four styles, signifying that concentration is complex and not something that simply comes and goes.



Focusing on attention

Attention has been defined as a multidimensional construct with at least 3 dimensions (Moran, 2004):

- Concentration: deliberate decision to invest mental effort on important aspects of a situation.
- Selective Attention: the perceptual ability to focus on task-relevant information, while ignoring irrelevant distractions.
- Divided attention: being able to perform two or more actions simultaneously.

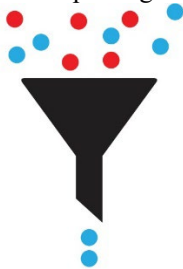
The Filter Metaphor (Broadbent, 1958)

Key assumption: **people are limited in their ability to process information**, meaning there must be a mechanism that facilitates the selection or deselection of information.

The analogy: **attention as a filtering device** that screens and restricts the flow of information into the mind with a set of early perceptual criteria. The filter limits the quantity of information we pay attention to at any given time.

Crucially:

- Information selection through the filter is believed to happen as a result of physical characteristics (such as loudness of message being processed).
- This theory was criticised for its inflexibility and limited sophistication but did pave the way for a switch to a visual paradigm of attention.



The Spotlight Metaphor (Posner, 1980)

Key assumption: attention resembles a mental beam that illuminates parts of the visual field, with information lying outside the beam ignored.

The analogy: **attention as a spotlight beam that can be redirected voluntarily** (internally and externally).

Crucially:

- Principle 1: concentration is never lost but can sometimes be directed at the wrong target.
- Principle 2: individuals have control over where they shine their spotlight.
- Links with Nideffer's (1976) four types of attentional focus: individuals can switch between the different attentional styles as the situation demands.
- Limited reference made to what processes govern the direction of the spotlight and neglects what lies outside the spotlight that can affect attentional processes.



The Capacity Metaphor (Kahneman, 1973)

Key assumption: interest is the **factor that influences the amount of attention capacity/attentional resources** available for a specific performance situation.

Crucially:

- If task A and B do not take up the attentional capacity, then both can be performed successfully simultaneously.
- The amount of attentional capacity available varies depending on arousal levels.
- Individuals have a greater amount of attentional capacity when they are fully alert (not fatigued) with less mental effort being required for highly practiced tasks.

The analogy: **attention as a pool of mental energy** that can be allocated to simultaneous tasks based on considered principles (such as interest levels and amount of practice).

Crucially:

- Attentional capacity is determined by: factors considered important at the time and factors that are always important.
- This theory is too simplistic, with the term attention applying to many separable processes, operating different cognitive subsystems.

Focusing on concentration

Concentration is never really lost, just misdirected to irrelevant, uncontrollable, future-focused factors:

- External distractions: auditory/visual information (information from coaches, noise from the crowd).
- Internal distractions: thoughts (what if's, regret, worry about others) feelings (anxiety, aggression), sensations (pain, fatigue).

Wegner (1994) proposed that the mind wanders because we try to control it, which is why attempting to block a certain thought from your mind may result in your becoming more preoccupied with it. The intention to suppress a thought activates an automatic search for that thought in an effort to monitor whether the act of suppression has been successful. Usually conscious thought dominates unconscious, unless our working memory is overloaded, and our attentional resources are depleted by stress or fatigue, then the unconscious prevails.

The **intention to concentrate** creates conditions under which mental load enhances monitoring of irrelevancies. This helps us understand why performers may find it difficult to suppress unwanted or irrelevant thoughts when they are anxious or tired.

Effective Concentration Principles (adapted from Moran 1996):



Concentration techniques:

- Performance and process goal focus: task-relevant information and controllable actions.
- Pre-performance routines: preferred sequences of actions and thoughts that prepare the mind to perform through focusing on task-relevant information, keep concentration on the present moment, and prevent over-focusing on skill mechanics.
- Self-talk: instructional and/or motivational trigger words that helps remind performers what to focus on. They should be short, vivid and positive phrases to yield maximum benefits.
- Imagery: mental rehearsal of physical actions that prepares and helps performers focus.
- Centering: directing attention inwardly to check pattern of breathing and muscular tension. Deep abdominal breathing can interrupt cognitive interference and refocus attention.

Consider

Now that you've reached the end of the article:

- What do these insights mean for your coaching?
- How can you help athletes improve the skill of concentration through creative practices?

[References](#)

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